ABSTRACT

The present invention provides Methyl- (or Mutant-) Differential Display (MDD) methods and nucleic acid probes for detecting mutations and the methylation patterns of nucleic acids. Regions of the genome are differentially methylated or mutated in different cell types, including cancerous cell types. The TSP50 gene is thereby identified and found to be differentially expressed in breast cancer cells. The present invention provides methods and compositions for identifying aberrant expression of the TSP50 gene and of tsp50 protein. Antibodies of the present invention can be used for diagnosis and treatment of diseases characterized by aberrant tsp50 expression.